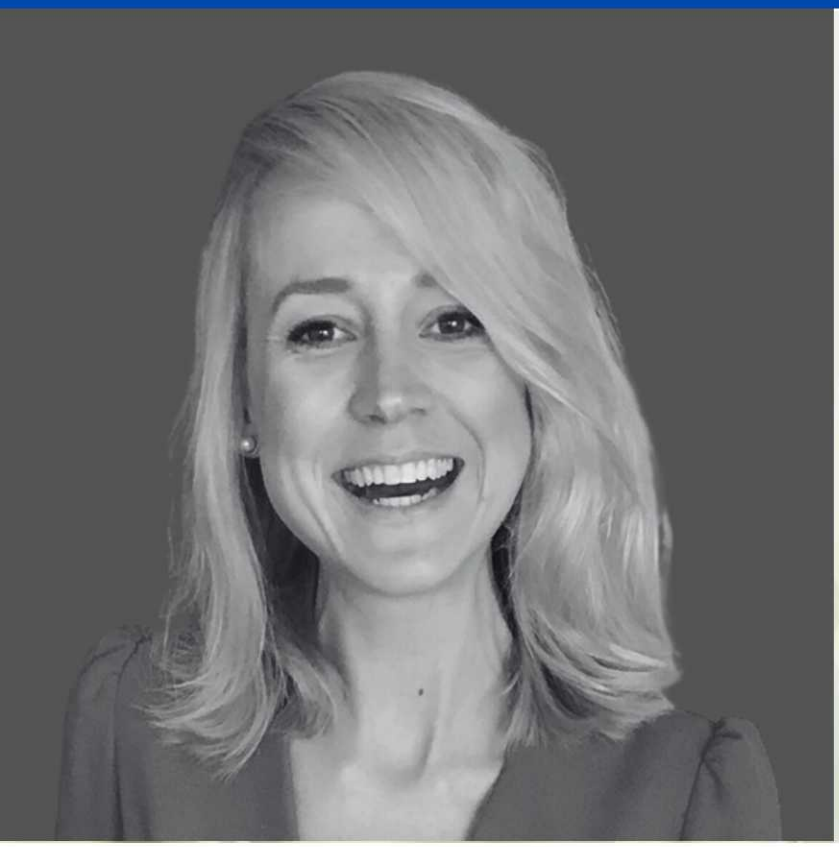
WATERZYME

Product Pack

Message from our CEO



We stand at the forefront of a critical environmental challenge, where blue-green algae blooms threaten the delicate balance of our ecosystems.

Anne Schoemaker, CEO

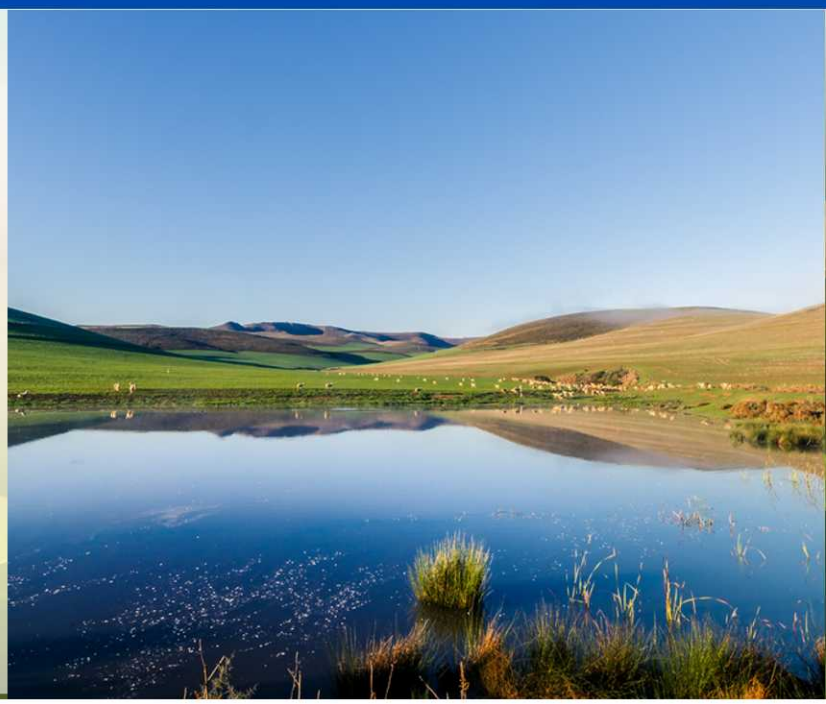
I am proud and excited to present to you our game-changing product Waterzyme - a revolution in the way we combat blue-green algae issues.

Our team of innovators, scientists and water industry experts have worked together to develop this novel solution, leveraging the power of enzymes derived from natural sources to treat harmful algal blooms. Through rigorous scientific validation, we have proven the efficacy and safety of our product.

Waterzyme treats the bloom and, by improving the water biology, we create a healthier environment for aquatic life, ensuring the sustainability of ecosystems and supporting the delicate balance of nature.

Waterzyme

Waterzyme is an enzyme-based solution that is scientifically-proven to eliminate cyanobacteria . It is fast, effective, and 100% natural.



Harmful Algal Blooms are an increasing global threat to human and animal health, and current strategies to manage toxic blooms are labour intensive, expensive and ineffective, typically requiring chemicals and heavy metals that can damage the aquatic environment and pose risks to humans and animals.

Waterzyme is a natural enzyme-based solution that is scientifically-proven to eliminate blue-green algae, ensuring clean, safe, and sustainable water for communities.

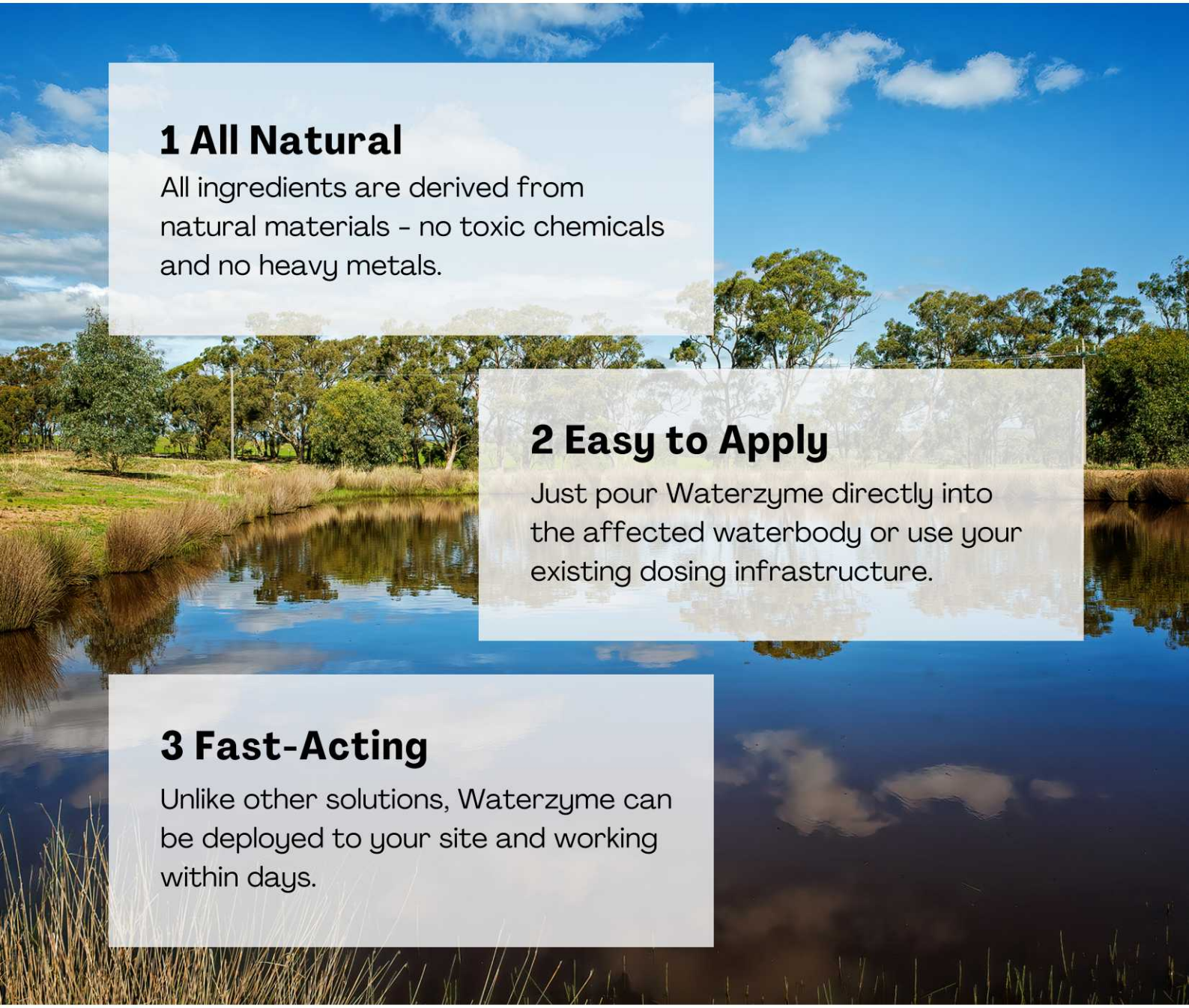
Unlike conventional chemical or ultrasonic algae treatments that pose risks to fish, plants and other aquatic life, Waterzyme is a toxin and copper-free solution that does not disturb the delicate balance of aquatic ecosystems.

Waterzyme not only provides a quick remedy for blue green algae issues but also strengthens the water biology in such a way that it inhibits further blooms.

At WATERZYME, we are excited to embark on a journey to improve water quality and create a sustainable, chemical-free future. Join us in making a difference – together, we can improve lives and livelihoods for generations to come.

Waterzyme Advantage

Waterzyme is a liquid bio-solution to cyanobacteria that can be applied to any water body - lakes or rivers, wastewater treatment ponds or drinking water catchments, or farms or irrigation dams. It is simple to apply, contains no toxic chemicals or heavy metals, and delivers results within days.



1 All Natural

All ingredients are derived from natural materials - no toxic chemicals and no heavy metals.

2 Easy to Apply

Just pour Waterzyme directly into the affected waterbody or use your existing dosing infrastructure.

3 Fast-Acting

Unlike other solutions, Waterzyme can be deployed to your site and working within days.

Waterzyme demonstrates superior performance to our competitors. Whilst many products on the market can treat algal blooms, none combine the all-natural, simple, fast-acting and comprehensive effectiveness of Waterzyme.

Many of our competitors use copper, which bioaccumulates in ecosystems and impacts aquatic life. Others use ultrasonics and aeration, which can impact organisms and have limited impact on the bloom. Whilst diatomic treatments tend to be effective in restoring ecosystem health, they do not guarantee bloom mitigation. Nutrient management is complicated for water bodies with multiple inflows.

Waterzyme's Comparative Advantage

Other solutions on the market cannot match the effectiveness, simplicity and speed of Waterzyme:

Copper-based Algaecides	Copper - whether in copper sulphate or "bio-active copper" form - bioaccumulates in animals and plants.
Ultrasonics and Aeration	Mechanical algae treatments such as ultrasonics are expensive and slow to deploy and can harm organisms
Diatomic Treatments	Diatomic treatments do not eliminate algal blooms and do not prevent them from occurring.
Nutrient Management	Effective bloom prevention technology but highly complex application, particularly with multiple inflows.

Waterzyme Applications

Waterzyme can be applied to any water body - including open or closed water systems - and by any industry or individual.

Key market segments, water body types, and customers include:

Market Segment	Water Body	Who
Utilities and Industrial	Wastewater Treatment Ponds, Drinking Water Dams, Desalination Ponds	• Utilities • Local Councils • Contractors • Private Industry
Agriculture and Dams	Irrigation Dams, Farm Dams, Aquaculture, Animal Drinking Water Reserves, Recreational Ponds and Dams	• Local Councils • State Governments • Primary Producers • Landholders • Golf Courses • Tourism Operators
Natural and Public Water Bodies	Rivers, creeks, lakes, man-made water bodies including recreational lakes	• Local Councils • State Governments • Natural Resource Managers

How it Works

Waterzyme contains enzymes that select and target cyanobacteria through multiple modes of action, including flocculation. It is Waterzyme's uniquely selective function that makes our product ideal and safe for any application.

1.Selective for Cyanobacteria

Our scientific research demonstrates that Waterzyme selects for cyanobacteria. The selective function of the enzymes evolved over millennia - we have simply optimised the process.

2.Multi-Modes of Action

Unlike conventional treatments, Waterzyme works in various ways - including cell wall interactions and flocculation. This natural process ensures that strata of species are treated and removed.

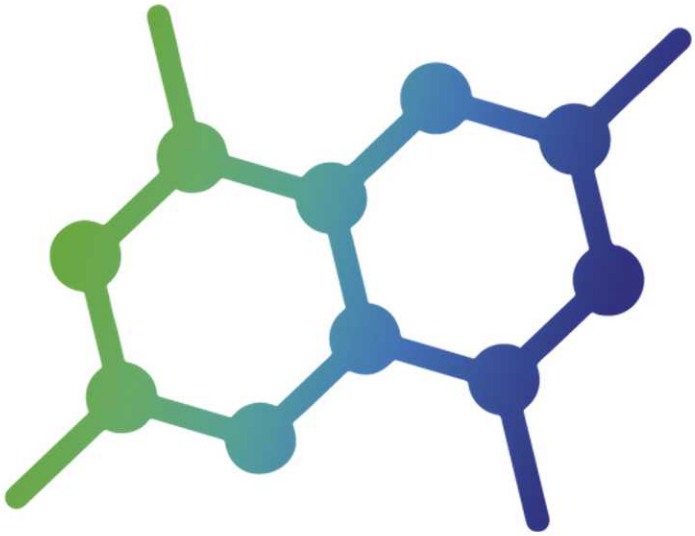
3.Supports Diatoms

Once the harmful algal bloom has been mitigated, Waterzyme works to support diatoms and ecosystem health for further defence against future blooms.

Modes of Action

Waterzyme has 6 key modes of action: disrupts ribosome function, inhibits nucleic acid, inhibits cell wall synthesis, modifies proton and associated anion dynamics, damages plasma membranes, and flocculates species for photosynthesis inhibition.

1. Disrupts ribosome function
2. Inhibits nucleic acid
3. Inhibits cell wall synthesis
4. Modifies proton and associated anion dynamics



5. Damages plasma membranes
6. Flocculates cyanobacteria

These multiple modes of action result in cell lysis/necrosis, encystment, cell cycle inhibition, ROS production, PCD, and photosynthesis inhibition.

Waterzyme also contains essential minerals that support diatom growth, which helps to restore ecosystem health and provide a natural barrier to future blooms.

Composition

Waterzyme is unique in the algae treatment market: our product does not contain heavy metals, is a perfect pH, and contains essential minerals that support ecosystem function.

Parameters	Background matrix (Rainwater)	Waterzyme (Undiluted)
*pH	7.53±0.05	7.55±0.05
*EC (mS/cm)	0.8±0.01	13.39±0.05
Total Dissolved Solids (mg/L)	148.0	1816.5±61.52
Total Suspended Solids (mg/L)	<1	1273.5±19.09
Total Alkalinity (mg/L CaCO3 equivalent)	41.00	980±5.66
Total Phosphorus (mg/L P)	<0.01	17.92±0.06
Phosphate (mg/L P)	<0.005	7.45±0.13
Total Nitrogen (mg/L N)	0.13	44.75±3.52
NOx (mg/L N)	0.03	0.10±0.03
Nitrate (mg/L N)	0.03	<0.05
Nitrite (mg/L N)	<0.005	0.10±0.03
Ammonia (mg/L N)	0.03	2.05±0.01
Total Organic Carbon (mg/L)	2.94	237.5±0.71
Silver (mg/L)	<0.001	<0.001
Aluminium (mg/L)	0.75	23.97±1.80
Arsenic (mg/L)	<0.001	0.02±0.002
Cadmium (mg/L)	<0.001	<0.001
Chromium (mg/L)	0.00	0.03±0.001
Copper (mg/L)	0.10	0.15±0.01
Iron (mg/L)	0.12	20.81±0.96
Manganese (mg/L)	0.00	2.55±0.07
Nickel (mg/L)	0.01	0.04±0.0001
Lead (mg/L)	0.006	0.04±0.0001
Selenium (mg/L)	<0.002	<0.002
Zinc (mg/L)	1.70	0.61±0.005
Mercury (mg/L)	<0.0005	ND
Lithium (mg/L)	<0.001	0.02±0.0005

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Composition

Waterzyme Australia's independent scientific services partner, The University of Newcastle, provided a complete physicochemical analysis of Waterzyme, including the mapping of enzymes.

Parameters	Background matrix (Rainwater)	Waterzyme (Undiluted)
Beryllium (mg/L)	<0.001	ND
Boron (mg/L)	0.03	0.753±0.03
Vanadium (mg/L)	<0.001	0.06±0.005
Cobalt (mg/L)	<0.001	0.01±0.0002
Strontium (mg/L)	0.08	1.22±0.004
Molybdenum (mg/L)	<0.001	<0.001
Antimony (mg/L)	<0.001	<0.001
Barium (mg/L)	0.01	0.36±0.001
Thallium (mg/L)	<0.001	<0.001
Bismuth (mg/L)	<0.001	<0.001
Thorium (mg/L)	<0.001	0.02±0.0001
Uranium (mg/L)	<0.001	<0.001
Calcium (mg/L)	16.47	<0.001
Magnesium (mg/L)	4.93	41.54±0.02
Potassium (mg/L)	5.57	566.17±2.14
Sodium (mg/L)	19.04	25.65±0.19
Sulfur (mg/L)	7.36	27.26±14.8
Phosphorus (mg/L)	0.47	17.43±0.62
Bromide (mg/L)	<0.1	<0.1
Silica (mg/L) – Total Recoverable	14.06	53.39±1.75
Silica (mg/L) – NaOH extract	15.45	60.51±6.34

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

Enzyme Profile

Our nature-derived enzymes are completely safe and are commonly found in waterways and organisms, including humans

Our enzyme profile:

- Scientifically-validated as a natural enzymatic product
- Two important enzyme categories are found in Waterzyme:
  - Glycoside hydrolases/carbohydrases; and,
  - Proteases
- All enzymes commonly found in waterways and organisms.

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Waterzyme Works

Waterzyme is not only fast-acting and safe to use in any water body, it is also effective. Working with our independent scientific research partner - The University of Newcastle - we have demonstrated the powerful performance of Waterzyme in reducing cyanobacteria across several field trials and calibrations.

Case Study

Singleton Wastewater Treatment Plant

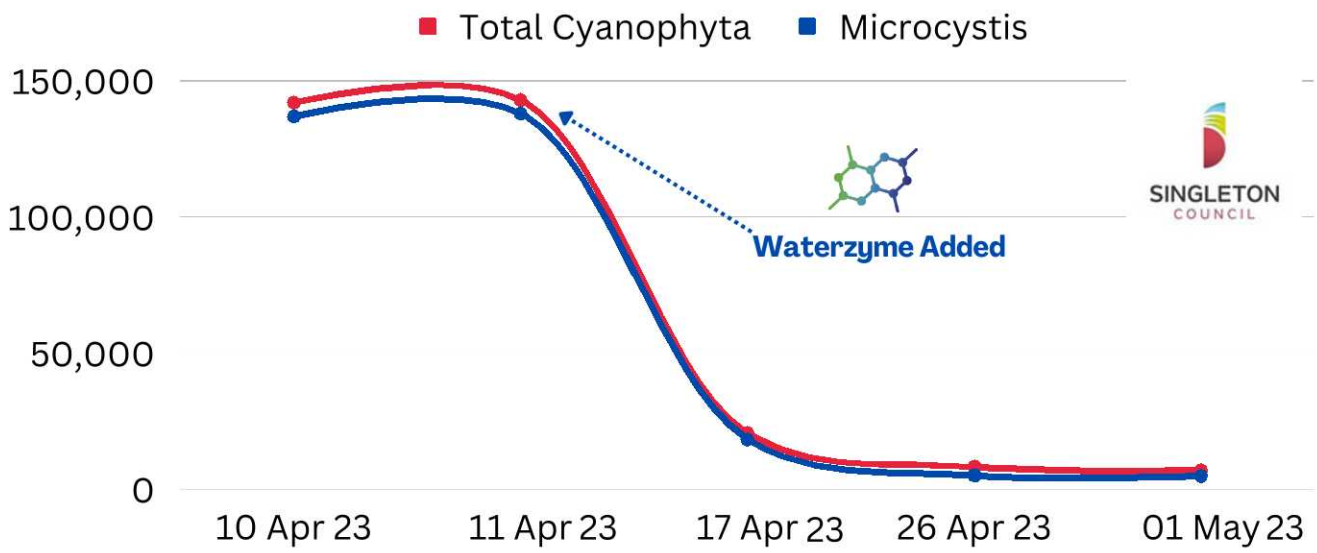
The tertiary wastewater treatment plant at Singleton has been experiencing harmful algae blooms (HAB), routinely monitored through an EPA sample. The following methodology was adopted to determine the effectiveness of Waterzyme on this HAB and other key water quality and aquatic species parameters in the receiving environment:

- The tertiary pond is around 30ML in capacity, 9 days of travel time, constant inflow and outflow.
- Recommended dose of Waterzyme is 1L per 250,000L of contaminated water, with dosing adjusted to account for constant outflow.
- Around 150L of Waterzyme applied at the front end, in line with the water-flow.
- Singleton Council has a weekly sampling and analysis program with the help of AECOM and ALS Pty Ltd.
- A pre-treatment sample was taken on 11th April, Waterzyme applied on 12th April, followed by weekly sampling and analysis as per Singleton Council routine analysis program.
- Independent testing by ALS on 17th April, 26th April and 1st May 2023

Initial testing by ALS at SWWTP on 11th April 2023 determined Total Cyanophyta at 143,000 cells/ml, dominated by Microcystis at 138,000 cells/ml. Waterzyme applied on the 12th April 2023 and independent monitoring results on 17th April 2023 showed that Total Cyanophyta and Microcystis dropped to 20,800 cells/ml and 18,400 cells/ml, respectively. Results on 26th April 2023 displayed the toxic cyanophytes dropped to 5,070 cells/ml (Microcystis spp.). Results on 1st May 2023 showed the toxic cyanophytes dropped further to 4,950 cells/ml (Microcystis spp.). Figure 1 displays the full results showing Total Cyanophyte and Microcystis was significantly reduced following the application of the product.

Singleton Wastewater Treatment Plant

Snapshot of results for Singleton WTP following Waterzyme application.



Water quality parameters as well as physicochemical and biological parameters revealed Waterzyme only targets the toxic algae species and does not affect other beneficial organisms:

- **Total Cyanophyte and Microcystis** were significantly reduced following the application of Waterzyme.
- **Water quality** parameters improved or were not affected.
- **Other green algae species** and flagellates responded without significant reduction
- **Diatoms increased** to compete with the cyanoblooms and supported other non-toxic microbes.

96% **Removal rate for Total Cyanophyta and Microcystis**

How to Apply

Unlike complex algae treatment technologies, Waterzyme is deployed quickly to your site, is simple to apply, and application methodology can be tailored to your site and needs.

Dosage Guidelines	• Standard dosage rate is **1 litre of Waterzyme for every 250,000 litres** of water for treatment - dosage may change with flow rates (in and out).
Simplicity of Application	• As a liquid bio-solution, Waterzyme is easy to apply. Simply pour, spray, or inject into your water body • Use existing approaches/ infrastructure to apply
Technical Assessment	• Every water body is different. The Waterzyme Technical Team can work with you to assess the best application methodology for your water body.

Please contact us and let our Technical Team work with you to optimise Waterzyme application to treat your blue-green algae problem

Duration

Waterzyme has scientifically-validated storage resilience and will generally continue working throughout a bloom season

Product Storage

Waterzyme demonstrates excellent storage resilience - it can be stored in most conditions for up to 12 months. We recommend that Waterzyme is stored in a cool (below 30 degrees C), dry, well-ventilated area.

Application Duration

Waterzyme will continue to work in closed water systems for a bloom season, and will generally work in water bodies with low in and out flows for 3-6 months. For water bodies with high flow rates, our Technical Team can work with you to determine duration and application dynamics.

Product Safeguard

We understand that your annual water treatment budget is limited. Waterzyme Australia provides a tailored Product Safeguard for our clients that ensures treatment of cyanobacteria for whole bloom seasons.

1 Bloom Season

Waterzyme generally works across a whole bloom season. If your bloom returns, we will apply more product.*

2 Customer Support

Contact us to discuss how the Product Safeguard can work for you. We will work with you for success.

3 Data Sharing

Sharing water quality data helps us understand how your bloom is tracking and to optimise application.

*Subject to conditions

Pricing

Our product can be applied in large or small water bodies and across any industry. Product pricing is dependent on volume and application requirements.

01

Context Assessment

To best serve our clients needs, we will conduct a context assessment, including understanding product requirements, site dynamics, and application methodologies to optimise your algal bloom treatment

02

Pricing Assessment

Based on this assessment, we will forward a pricing structure that works for you. Our Sales Team are ready to provide you with a clear quotation for Waterzyme treatment and to work with you on product delivery.

03

Tailored Partnerships

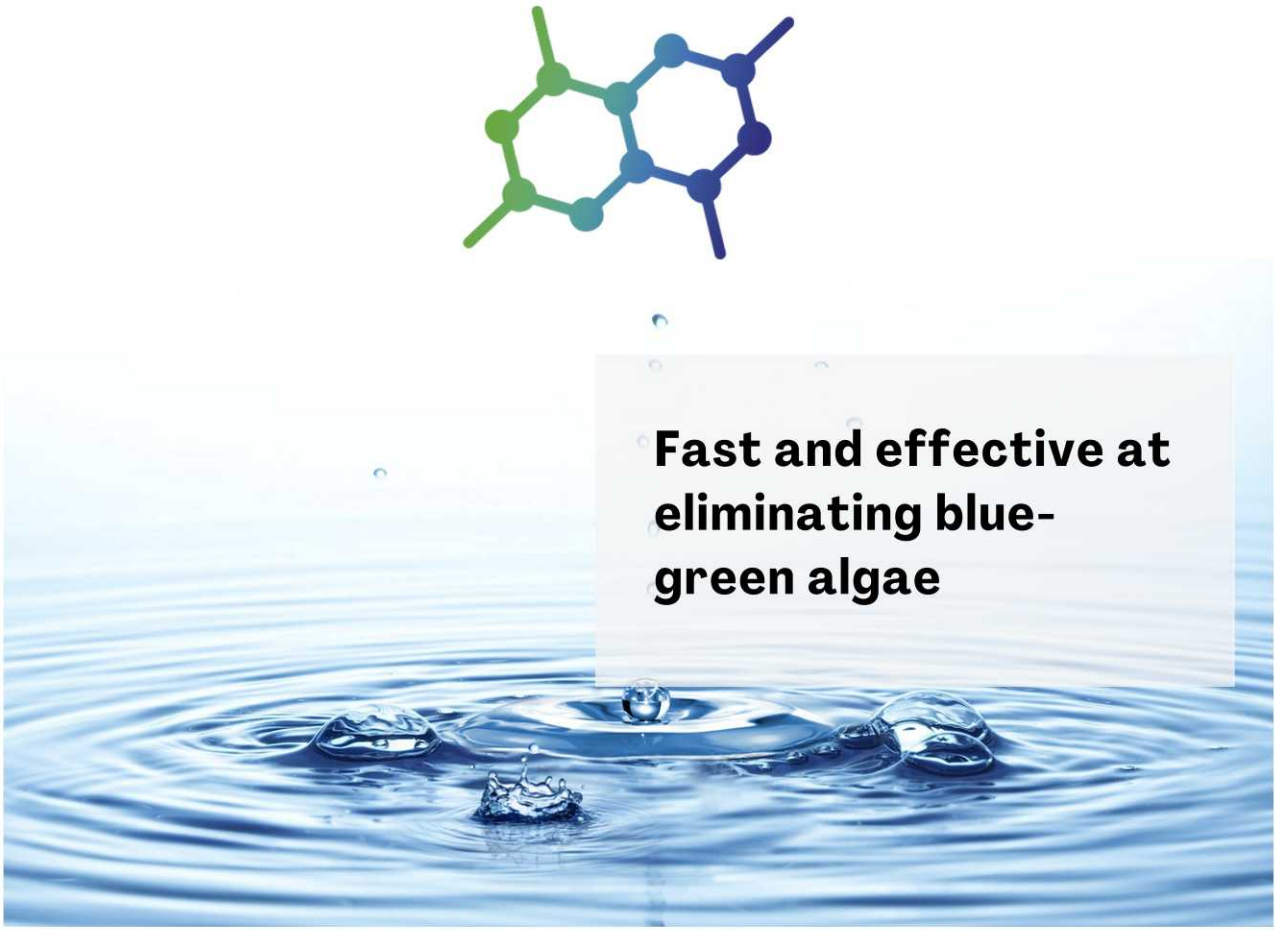
We will work with you to ensure that our product works for your organisation and that data from your treatment is shared with Waterzyme Australia to optimise future applications.

Contact us today to discuss product application requirements, volumes, and pricing packages to solve your harmful algal bloom.

Eliminate Your Bloom

Join us to eliminate your harmful algal bloom and restore balance to your water quality.

CONTACT OUR SALES TEAM TODAY



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